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Thoughts on the Force Fires Coordination Center

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Thesis: The United States Marine Corps Force Fires Coordination Center (FFCC) is the agency through which the Marine Expeditionary Force (MEF) commander can access all command and control systems required to shape the battlefield. This paper provides background and real world experience during Desert Storm. The paper recommends an organizational solution and some basic functions of the MEF commander's warfighting arm.

USMC; Command and Control; C2; C3; C4I;
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THOUGHTS ON THE
FORCE FIRES COORDINATION CENTER

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THOUGHTS ON THE
FORCE FIRE COORDINATION CENTER

OUTLINE

The Force Fires Coordination Center is the agency through which the MEF commander can access all systems required to shape the battlefield.

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INTRODUCTION

Is the MAGTF Commander a Warfighter or Allocator?

Periodically the question arises concerning whether a Marine Expeditionary Force (MEF) commander is a warfighter or an allocator. Does he take an active role in deciding when, where and how the battle is fought, or does he just divide assets among his subordinates? Guidance promulgated by the Commandant of the Marine Corps (CMC) throughout the years has attempted to resolve the issue but has been sufficiently vague to leave the decision to the MEF commander. Consequently, the MEF commander chooses his own destiny: warfighter or allocator.

The Warfighter Fights the Deep Battle.

As a warfighter, the MEF commander fights the deep battle. The deep battle is defined as the area forward of the Fire Support Coordination Line (FSCL) to the limit of the MEF's zone (Figure 1). In fighting the deep battle, the MEF commander visualizes the conditions under which future operations will take place, and then shapes the battlefield to match these conditions.

Prior to and during Operation Desert Storm, there was no published doctrine on how to fight a MEF or how to fight the deep battle. In fact published MEF doctrine does not exist today. Additionally, neither the organizational structure nor the personnel required for wartime operations exists.

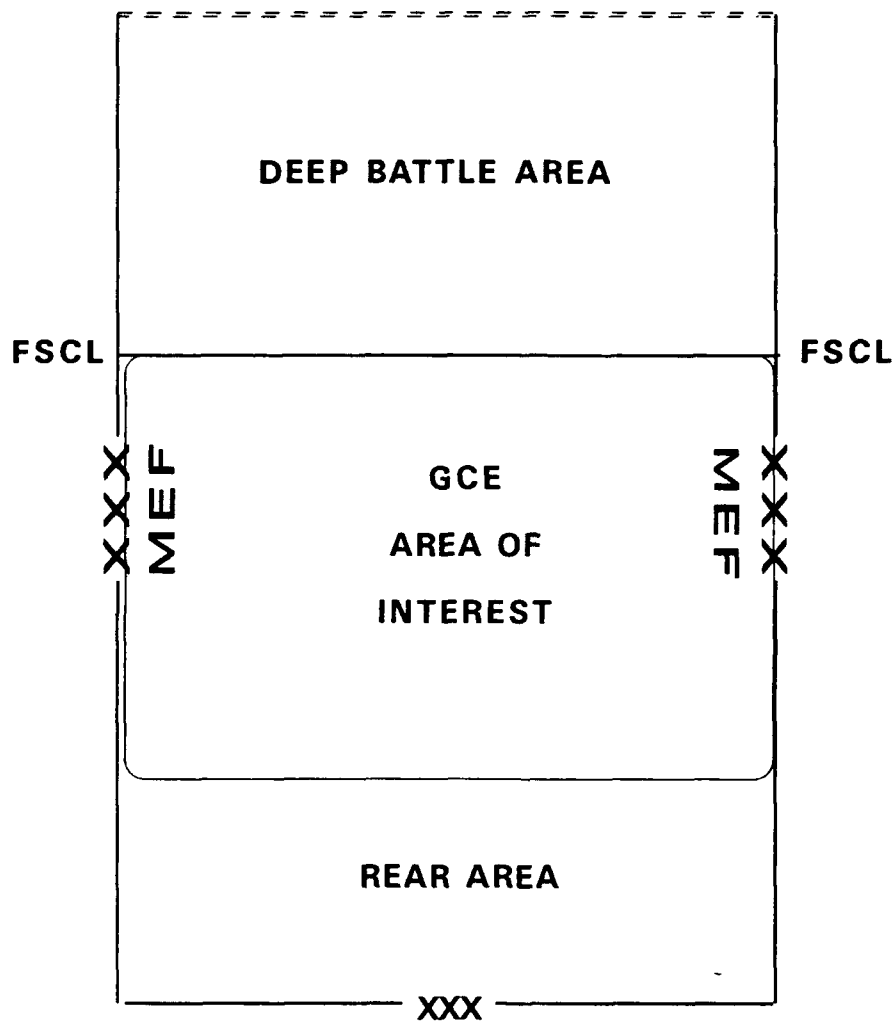


Figure 1 The Deep Battle

The FFCC is the MEF Commander's Warfighting Arm.

This paper will take a look at the Force Fires Coordination Center (FFCC), an agency designed to be the MEF commander's warfighting arm. The paper will attempt to determine where it came from, where it stands today, and where it is headed for tomorrow. It will examine its capabilities with the hope of exposing its deficiencies. Ultimately it will suggest issues for consideration by those who will undoubtedly research this topic in the future. All of this will be done in the context of whether or not the FFCC can provide the MEF commander an agency through which he can shape the battlefield.

THE FFCC FROM A HISTORICAL PERSPECTIVE

What is the Role of Combined Arms in Warfighting?

Marine Corps warfighting doctrine is based on rapid, flexible, and opportunistic maneuver. The aim of maneuver warfare is to render the enemy incapable of resisting rather than to destroy him physically through incremental attrition. Maneuver warfare strives to concentrate fires and forces at decisive points and times to support the commander's scheme of maneuver. Use of fires is essential to conducting successful maneuver warfare. (8:59)

Fire support in maneuver warfare is applied through combined

arms, the integration of forces to place the enemy in a no-win situation: to counter one force, he must make himself vulnerable to another. At lower levels, tactics and techniques are used to achieve a combined arms effect. At higher levels, task organization is used to combine the complementary characteristics of different units' firepower and mobility.

At the Marine Air Ground Task Force (MAGTF) level, assault support is used to concentrate ground forces. Artillery and close air support (CAS) are used as combat multipliers to support ground forces. Deep air support is used to shape the battlefield for tomorrow's fight.

Operation Desert Storm Sparks Requirement for an FFCC Birth of the FFCC.

During Desert Shield and Storm, General Boomer realized that to be a warfighter and successfully prosecute maneuver warfare, he would require an agency that permitted him access to all systems necessary to shape the battlefield. These systems included intelligence, aviation, logistics, C3, air defense, and fires. No existing agency could access all of these systems. An ad hoc structure was formed that attempted to fulfill the requirement. More than two years after Operation Desert Storm, that fledgling structure has developed into what is now termed the FFCC.

The MEF FFCC was required to coordinate the allocation of fires to support the close battle and actively fight the deep battle. This last statement brings up a fine distinction. What is the difference between an "allocator" and a "warfighter"? The difference hinges on whether the MAGTF commander simply arbitrates disputes between his MSEs while the ground commander determines objectives and scheme of maneuver, or whether he takes a more active role in how the operation is run. In Desert Storm, the MEF commander played the more active role. Consequently, something more than the traditional FSCC was required to fulfill his needs. In short, the MEF commander needed an organization through which he could decide which targets should be attacked, determine the priorities for attacking those targets, and determine how much damage needed to be done to those targets. Additionally, he needed to coordinate with the Commander-in-Chief (CINC) for external fire support needed within the MEF zone and the desired effects on targets outside the MEF zone that might affect MEF operations.

Why an FFCC in Desert Storm?

A common explanation for the organization of a MEF-level coordination center during Operation Desert Storm is that since there were two Marine divisions within the same theater, an organization was needed to coordinate fires between them. According to Major Curt Munson, who was intimately involved with

the formation of the FFCC, this is not true. Artillery coordination between the two divisions was handled by the left and right-most units along the division boundaries. CAS between the two divisions was coordinated through the use of a "push" CAS stack. Aircraft were scheduled into this stack and called for by either division as needed. There was so little naval gunfire available for the divisions that no significant coordination was required. Most of the 80 missions fired by the Navy were in support of Joint Forces Command East (JFC-E).(4:5)

A more accurate explanation for the formation of the FFCC was the MEF commander's need for a warfighting agency. This involved some drastic changes from the routine duties of fire support personnel. Fires took on the role of fighting the deep battle in order to shape the scenario for future battles. The primary MEF-level coordination during Desert Storm was between the close and deep battles.

External to the MEF, the FFCC served two main functions in Desert Storm. The first was the standard fire support coordination that occurred between adjacent commands. In this case, the coordination took place between the MEF, JFC-E, and JFC-N. The principal activity was ensuring that cross-boundary fires did not impact on friendly forces. The second function that the FFCC performed in Desert Storm was response to tasking by the CINC to coordinate fire support for JFC-E. The Target Section coordinated JFACC air support for JFC-E by nominating

JFC-E targets.

FFCC VS. FSCC: A COMPARISON

In the past, the role of the MAGTF FSCC was solely to implement that part of the MAGTF commander's intent which was focused on the deep battle or that part of the battle that lay beyond the area of influence of the Ground Combat Element (GCE) commander. To execute this deep battle, the MAGTF commander would retain operational control (OPCON) of Marine aviation, long-range target acquisition assets, and naval gunfire (NGF) assets, allocating them to subordinate commands as appropriate.

The preponderance of the MAGTF FSCC's effort was expended in planning rather than integration of delivery of these supporting arms. The FSCC functioned under the General Staff supervision of the G-3/S-3 and was an advisory and coordinating agency only. It was not vested with command functions and was not charged with actual control or direction of fire support missions.

By contrast, the FFCC is not only involved in the orchestration of the close and deep battles, but is also used by the MAGTF commander to actively fight the war. During Desert Storm, the primary MEF-level coordination occurred between the close and deep battles. The MEF commander, through his FFCC, decided not only how much fire support would be allocated to the close and deep battles, but how and where the effort allocated to

the deep battle would be applied and what the desired effects were. How assets were allocated to the divisions depended on the commanders' requirements to support their scheme of maneuver. The division commanders then determined how those assets were to be used.

In wartime, the best laid plans go astray, and such was the case in Desert Storm. FFCC personnel reported numerous changes that occurred between the time a target was nominated or assigned and when the strike was actually carried out. They also reported that the dividing line between future plans and current operations tended to be indistinguishable at times. Target changes took many forms: targets would become invalid as new intelligence was received, new high-value targets would be found, more or fewer aircraft than planned would actually be available, and NGF would become available (or unavailable). Thus, the MEF FFCC formed the bridge between plans and operations for two reasons. by design, with the Target and FSOC sections; and by necessity, due to the continual changes that formed the FFCC's version of the "fog of war."

MAGTF FIRE SUPPORT ORGANIZATION

The Command Element

The MAGTF FFCC conducts fire support planning and coordination in operations. The MAGTF FFCC develops fire support

plans to support the deep operations portion of MAGTF operations and participates in the planning for joint and combined deep operations. Fire support planning for the close battle is left to the GCE commander. The FFCC coordinates close and deep operations with the GCE FSCC.

The FFCC is responsible for providing damage assessment to the GCE. The GCE uses this information to plan its future operations. It enables the GCE to exploit the success of deep operations.

During actual fire support operations, the FFCC maintains liaison with and disseminates fire support information to the GCE FSCC, the senior agency of the Marine Air Command and Control System (MACCS), and the Rear Area Operations Center (RAOC).

The FFCC is the terminal for GCE fire support requirements. The FFCC receives target nominations and coordinates the GCE's requests for fire support with other agencies. FFCC coordination with the other MAGTF major subordinate elements (MSEs) is depicted in Figure 2.

The Ground Combat Element

The GCE commander conducts fire support operations through his FSCC. FSCCs are established at all levels down to battalion. The FSCCs provide the planning and coordination for fire support operations for their unit. They also integrate fires with the commander's scheme of maneuver. Tactical interface between

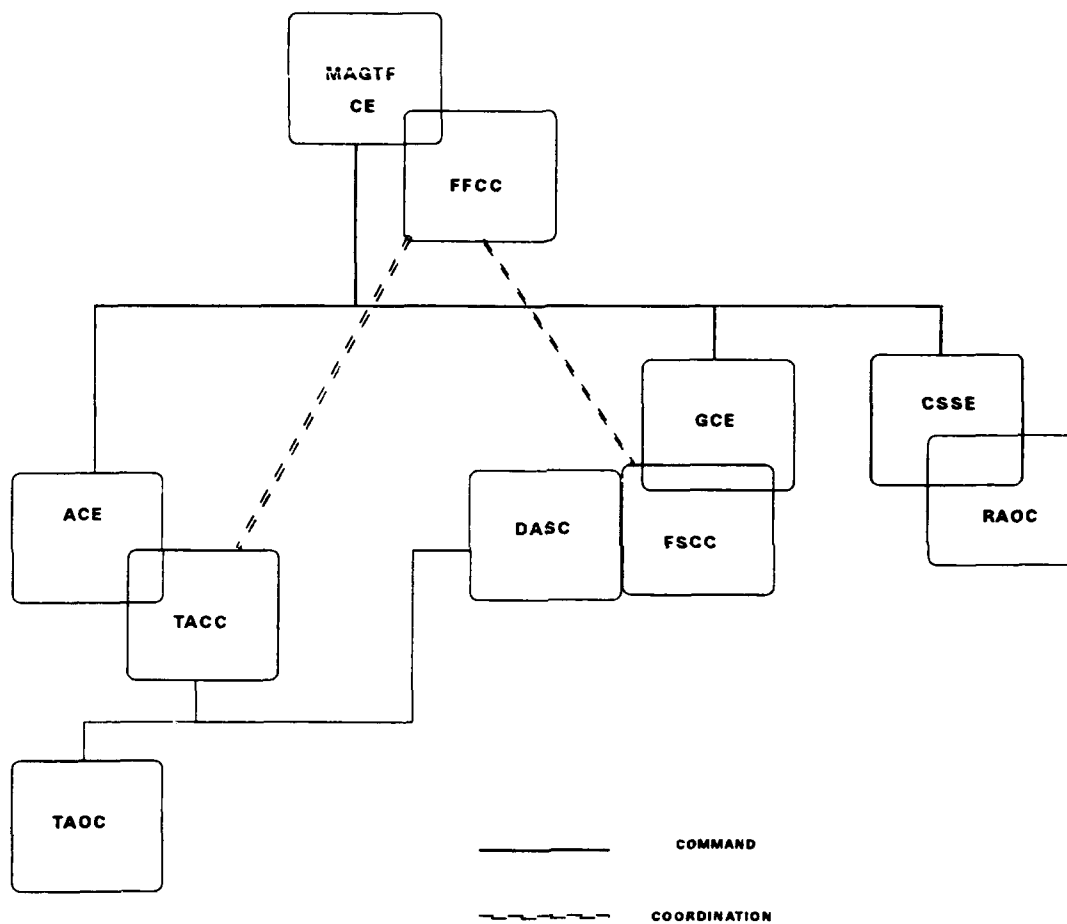


FIGURE 2 FFCC COORDINATION REQUIREMENTS

elements of the GCE and the ACE is done through Tactical Air Control Parties (TACPs) organic to GCE units and the Direct Air Support Center (DASC). Conflicts which cannot be resolved are forwarded to the MAGTF FFCC.

The Aviation Combat Element

The ACE provides the MAGTF commander with his primary means for influencing the deep battle. The ACE commander conducts fire support operations through the MACCS.

The MAGTF and ACE commanders identify apportionment and allocation of air support. Based on the MAGTF commander's guidance, the ACE commander establishes his air tasking order (ATO).

The MAGTF also interfaces with the joint force air component commander (JFACC). Fire support coordination measures and procedures must be coordinated with joint and allied forces for deconfliction.

The Combat Service Support Element

The CSSE commander is responsible for the coordination of rear area operations. There is no formal agency in the CSSE for coordination of fire support. The CSSE usually forms a fire support coordination cell in the RAOC. This cell's primary functions include coordination and clearance of fires in the rear area. The RAOC maintains close coordination with the FFCC for

fire support coordination requirements.

ORGANIZATION OF THE FFCC

Structure of the FFCC

To this point, we have discussed the background and functions of the FFCC. Now let us look at its structure. As previously mentioned, similarities exist between the FFCC and the FSCC. The FFCC's structure, however, reflects some changes based upon the need for the MEF commander to fight the deep battle. Figure 3 details the personnel required to man the FFCC in garrison or combat. If the headquarters goes to war, the personnel listed as non-chargeable are included in the Table of Organization to make it complete. These personnel are reservists or Marines from another unit tasked to fill out the complement of members for a wartime FFCC.

The MAGTF commander task-organizes his FFCC with the personnel, equipment, and command and control appropriate to the tactical situation and mission. Figure 4 shows a typical MEF FFCC.

Section Responsibilities and Functions of the FFCC

The entire staff of the FFCC is subordinate to the commander's operation officer (G-3). As the Fire Support Coordinator (FSC) in the Marine division works for the G-3, so the Force Fire Coordinator (FFC) at the MEF works for the G-3.

TABLE OF ORGANIZATION
FOR THE
FORCE FIRES COORDINATION CENTER

LINE NO.	ENGLISH DESCRIPTION	GRADE	MOS	TYPE	MARINE		NAVY		NON-CHARGE	
					OFF	ENL	OFF		OFF	ENL
120	FORCE FIRES COORD CENTER									
120A	FORCE FIRES COORD OFFICER	COL	9906	O	1					
120B	ASST FFC OFFICER	LTCOL	0802	O	1					
120C	FORCE FIRES CHIEF	MGYSGT	0861	E		1				
121	TARGET INFORMATION SECTION									
121A	TARGET INFORMATION OFFICER	LTCOL	0802	O	1					
121B	ASST TARGET INFO OFFICER	MAJ	9965	O				1		
121C	TARGET INFORMATION CHIEF	GYSGT	0861	E		1				
121D	ASST TARGET INFO CHIEF	SSGT	0861	E						1
121E	FILES CLERK	CPL	0151	E		1				
121F	FILES CLERK	LCPL	0151	E						1
121G	TARGET PLOTTER	CPL	0861	E		1				
121H	TARGET PLOTTER	LCPL	0861	E						1
121I	ASST TARGET INFO OFFICER	MAJ	0802	O				1		
122	PLANS SECTION									
122A	PLANS OFFICER	LTCOL	0802	O	1					
122B	NAVAL GUNFIRE PLANS OFF	LCDR	1100	O			1			
122C	FIXED WING AIR PLANS OFF	MAJ	9965	O	1					
122D	FIXED WING AIR PLANS OFF	CAPT	9965	O					1	
122E	PLANS CHIEF	GYSGT	0861	E		1				
123	FIRES SECTION									
123A	FIRES OFFICER	LTCOL	0802	O	1					
123B	ASST FIRES OFFICER	MAJ	0802	O				1		
123C	NAVAL GUNFIRE OFFICER	LCDR	1100	O			2			
123D	WATCH OFFICER	MAJ	0802	O	1					
123E	WATCH OFFICER	CAPT	7565	O				1		
123F	ASST FIRES OFFICER	MAJ	9965	O				1		
124	FIRES WATCH CHIEF	MSGT	0861	E		1				
124A	ASST FIRES WATCH CHIEF	GYSGT	0861	E						1
124B	JOURNAL CLERK	SGT	0861	E		1				
124C	JOURNAL CLERK	CPL	0861	E						1
124D	PLRS CLERK	CPL	0861	E		1				
124E	PLRS CLERK	CPL	0861	E						1
124F	SCOUT/L JERVEN/DRIVER	CPL	0861	E		1				
124G	SCOUT/OBSERVER/DRIVER	LCPL	0861	E						1
124H	PLOTTER/DRIVER	CPL	0861	E						1
124I	PLOTTER/DRIVER	LCPL	0861	E		1				
SECTION TOTALS					7	10	3	6	8	

Figure 3

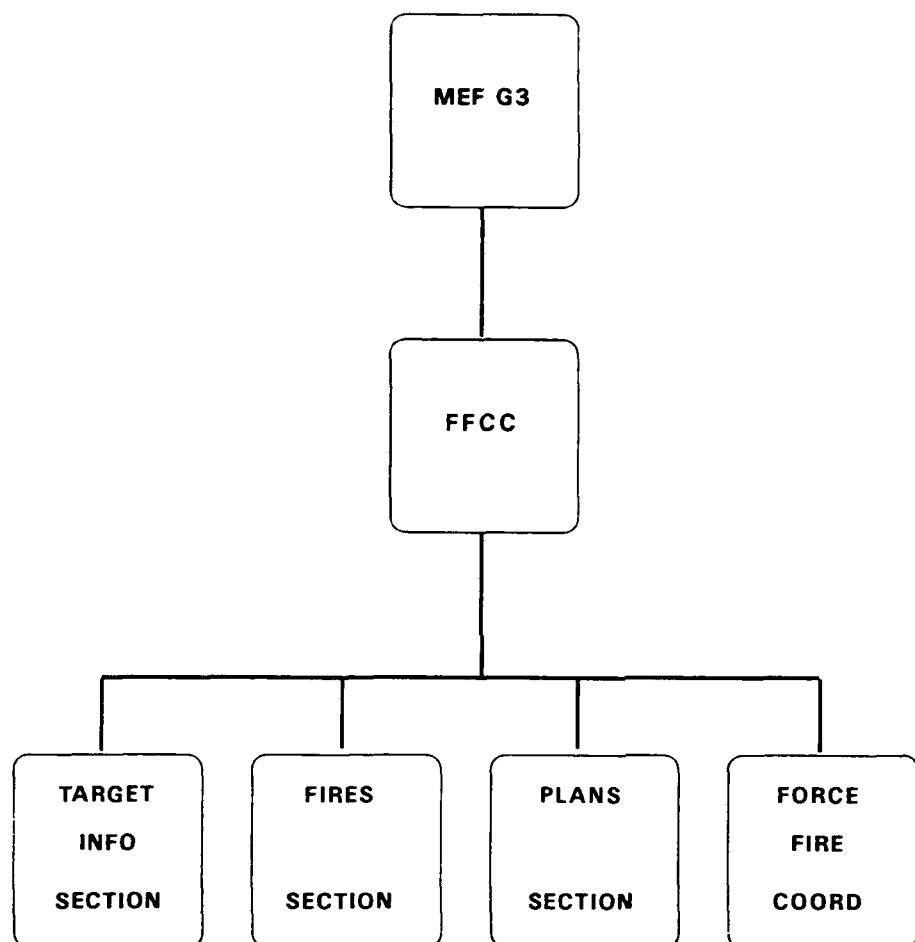


Figure 4 FFCC Organization

The FFCC consists of four sections: the Target Information Section, the Fires Section, the Plans Sections, and the Force Fires Coordinator. The Target Information Section sets the FFCC apart from the FSCC. The commander has the opportunity to shape the battlefield, but this targeting section is concerned with deep battle and close battle targets. It considers all attack options and the full range of operations that might improve the conditions under which the current and future battle will be fought. Its focus is the enemy and his ability to interfere with the MEF's plans and objectives.

The Target Information Section interacts with the Fires Section for the close battle and with the Plans Section for the deep battle. To ensure all actions and capabilities are considered, the Targeting Information Section will head a targeting board which will include those personnel listed in Figure 5. These personnel will provide to the commander their experience to ensure proper targets are sorted, validated, prioritized, and attacked with the primary result of shaping the battle as the commander sees fit.

The Fires Section includes air, artillery, and NGF assets. It is responsible for immediate targeting requirements and coordination and deconfliction of fires. This part of the operation most closely resembles the old idea of the FSCC. The Fires Section conduct coordination and liaison required to execute the close battle. Using the fire support

TARGETING BOARD PERSONNEL
FORCE FIRES COORDINATOR
G-2 REPRESENTATIVE
G-3 REPRESENTATIVE
TARGET INFORMATION OFFICER
TARGET INTELLIGENCE OFFICER
AIR OFFICER
ELECTRONIC WARFARE OFFICER
NBC OFFICER
AIR DEFENSE OFFICER
ENGINEER REPRESENTATIVE
G-4 LOGISTICS REPRESENTATIVE
NAVAL SURFACE FIRE SUPPORT OFFICER

OTHER AS NEEDED
PSYCHOLOGICAL OPERATIONS OFFICER
DECEPTION OFFICER
SOF REPRESENTATIVE
STAFF JUDGE ADVOCATE

Figure 5

doctrine of coordination at the lowest level, the Fires Section will only be used to coordinate fires when it is absolutely required. Even with coordination between two divisions, the Fires Section will not normally interfere since its focus will be on the MEF Commander's interaction with the other component commanders.

The third section of the FFCC is Plans. This section uses the experience of artillery, naval gunfire, and aviation personnel to ensure the future battle is well executed. All weapon systems will be considered since the future battle of today will, tomorrow, be our close battle.

The FFC controls and coordinates the employment of the other three sections. He is involved in both developing and executing plans, and therefore serves as a crucial bridge between these two phases. As stated above, the FFC allows the MAGTF commander to coordinate both the close and deep battle.

For the close battle, the GCE forwards target requests to the FFCC. These are entered into the cyclic targeting process. Depending on the priority of the target and the effect desired, the FFCC can either assign the target to the ACE, or nominate it to the Joint Targeting Board operated by the JFACC. CAS missions are coordinated through the DASC, which is usually co-located with the division's FSCC. If no air power is available, or if the target is not suitable for an air strike, it can be handled by the Fires Section. This section also implements and

disseminates the fire support coordination measures. For example it ensures that the GCE commanders are aware of any changes to the FSCL.

The principal agent for planning the deep battle is the Target Section. The G-3 Plans Division will provide the MAGTF commander's direction, intentions, and requirements, which the Target Section translates into target nominations and assignments. Target intelligence and battle damage assessment (BDA) are provided by the G-2 Target Intelligence Officer.

Functions of the FFCC

The following are proposed functions of the FFCC.

1. Integrate and control deep fires.
2. Coordinate employment of surface and air delivered weapons within the MAGTF area of operations.
3. Coordinate with the senior element of the Marine Air Command and Control System (MACCS).
4. Monitor the ATO cycle.
5. Maintain coordination with the fires agencies of the MSCs.
6. Provide representation to the Joint Targeting Board and the JFACC in joint operations.
7. Submit target nominations to CJTF for attack using joint assets.

The FFCC coordinates fire support for the close battle in

the following manner:

1. Coordinates separation of fires between the close and deep battle areas.
2. Plans fires and electronic warfare required to provide close battle area security using organic MAGTF or other agencies assets.
3. Coordinates the use of fires assets which are attached to the MAGTF from outside agencies.
4. Coordinates apportionment of Marine air between the various types of tactical mission assignments.
5. Allocates Marine air in support of the close battle.
6. Provides liaison to higher and adjacent headquarters to nominate close battle targets for attack.

The FFCC conducts the fire support portion of the rear battle. It provides the following coordination measures between the MEF and the rear area commander:

1. Recommends fire support organization required to support current threat level in the rear area.
2. Coordinates rear area security fires with higher, adjacent, lower, allied, and host nation agencies from the RAOC.
3. Plans appropriate fire support coordination measures for rear area security.
4. Integrates and controls fires in the rear area.

ISSUE FOR THE FUTURE

One of the important issues that is pertinent to the operation of the FFCC is the dissemination of the ATO. This document is essential to the successful execution of the FFCC's mission. As we saw in Desert Storm, the ATO process is far from perfect. Participants at the 1992 Air Command and Control Joint Operations Seminar concluded that the joint ATO system used in Desert Storm was not flexible enough to meet the needs of the MAGTF. The fact that the ATO planning process was based on a 72-hour period was hailed as a large part of this problem. For the FFCC, the future battle is defined as 72 hours and beyond, while the present battle takes place well within 72 hours. This means that while the ATO process may take part of the future battle into account, it is not far reaching enough, and it is woefully inadequate to deal with the present battle. The strike record on fixed targets was relatively good, but moving targets were often missed or not reattacked because they had moved on in the interim.

Other problems with the ATO process highlight the need for a liaison between the FFCC and JFACC, such as late taskings, availability or unavailability of air assets, or simple things such as a delay in the distribution of the ATO or some questions on detail.

In Desert Storm, changes to the ATO for a given day could

accumulate to such a degree that the planners would all far behind in disseminating any product that the warfighters could use. Perhaps the largest impediment to the dissemination of the ATO in Desert Storm was the service's use of message systems which were not compatible with each other. Between the complications caused by differing equipment and dissimilar protocols, getting the ATO every day could become a monumental task.

Summary

The Force Fire Coordination Center is the agency through which the MEF commander can access all systems required to shape the battlefield. This paper provided background and real world experience during Desert Storm. As a result we have recommended an organization and some basic functions of the MEF commander's warfighting arm.

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